September ##, 2018

Certified Mail

Return Receipt Requested

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Kelly McFadden

Manager, Stationary Source Unit

Office of Air and Waste

EPA Region 10

1200 Sixth Ave., Suite 155, OAW-150

Seattle, WA. 98101

RE: NSPS OOOOa Well Site LDAR Delay of Repair Extension Request

Dear Ms. McFadden:

ConocoPhillips Alaska (COPA) hereby submits the following request for the United States Environmental Protection Agency (EPA) to grant a short extension of the 2-year deadline for executing repairs on fugitive emission components imposed under 40 CFR 60.5397a(h), for three well site valves at the Kuparuk River Unit (KRU) oil field. A three-month extension would allow the repairs to be made with less methane emissions than would occur without an extension, better serving the overall purpose of the OOOOa Rule.

COPA operates crude oil production facilities on the Alaska North Slope. The production facilities contain multiple well sites connected to a central processing facility. The well sites contain a combination of surface equipment located in enclosure buildings, such as piping manifolds, wellheads, and freeze protection storage.

NSPS Subpart OOOOa applies to "affected facilities" constructed, modified or reconstructed after September 18, 2015. 40 CFR 60.5365a. Production wells are one class of affected facility. Subpart OOOOa required an initial monitoring survey of fugitive emissions components at Alaska North Slope well sites that are affected facilities by deadlines specified in 40 CFR 60.5397a(f)(1). COPA timely performed that survey using optical gas imaging at KRU before 3 June 2017. COPA found 123 components with fugitive emissions per 40 CFR 60.5397a(c)(7)(i)(B)i in the spring surveys.

Subsection §60.5397a(h) sets repair deadlines for fugitive emissions components identified through a survey as sources of fugitive emissions. COPA will timely repair 120 of the 123 fugitive emissions components identified in its initial survey of KRU production

i Per §60.5430a, for purposes of the fugitive emissions standards at §60.5397a, well site also means a separate tank battery surface site collecting crude oil, condensate, intermediate hydrocarbon liquids, or produced water from wells not located at the well site (e.g., centralized tank batteries). Lacking battery tank surface sites in the KRU, drill site gravel pad surface (e.g. well head to edge of pad) was used per §60.5430a - "any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed."

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facilities. Subsection §60.5397a(h)(2) provides additional time to repair leaks at components that would be unsafe to repair during operation of the unit. For components installed on wells the rule requires completion of repairs during the next scheduled well shutdown or well shut-in, or within 2 years, whichever is earlier.

COPA's initial well site LDAR survey performed between 1 May and 5 May 2017 identified the following three fugitive emission components that are technically infeasible to repair safely without equipment shutdowns to isolate and blowdown flowlines:

1. HV-3G-2006 - Pad edge gas lift supply valve for 3G pad

2. ¾" Gate Valve at 3N pad on top of the gas lift header inside the manifold

3. HV-3R-2001 - Pad edge gas lift supply valve for 3R pad

Each of these components require the isolation and shut-in of a well site lines to complete the repair. The leaking components will require the following to be de-pressured upstream and downstream to complete the repair including at least the following lines:

• 24,250 feet with nominal pipe diameter of 8 inches; and

• 30,000 feet with nominal pipe diameter of 10 inches.

Altogether, roughly 10 miles of lines will need to be shut down to safely repair these three remaining components with fugitive emissions. The isolations will require venting estimated to be the following:

1. 100 Mscf

2. 380 scf

3. 190 Mscf

For decades, the major facility maintenance schedule at KRU has followed a schedule that involves a major facility turnaround once every three years, during the summer season when wells can be shut-in without concern about freezing. The lines referenced above will be shut down during the next scheduled CPF3 turnaround, beginning in July 2019. That is the most sensible time to repair the three remaining components with fugitive emissions.

The three-year turnaround schedule is based on COPA's evaluation of the potential hazard analyses with appropriate risk reduction factors and critical safety system equipment such as remote operated valves and emergency shutdown processes. This allows for complete emergency shutdown testing, which confirms system robustness and reliability. Extreme, arctic conditions of the KRU weather limit planned facility shutdowns to July and August for accessibility such as snow drifting and frozen or rimed outdoor components and safety considerations of personnel and equipment. A turnaround is a long-planned, very significant maintenance event that must be intensely coordinated to ensure safe, successful, and timely performance.

The within 2 years deadline for completion of repairs specified in subsection 60.5397a(h) will fall in May 2019, roughly two and half months prior to the shutdown of the lines for the between July and August turnaround. As mentioned above, to execute these repairs, COPA must blowdown the line and shutdown well production feeding this equipment. It

is not possible to bypass these lines during normal well production. The first scheduled opportunity to isolate the line is during the CPF3 planned turnaround event scheduled for July through August 2019. Lines are shutdown at the beginning of turnaround, thus leaks will cease at start of turnaround.

It is not feasible to advance the start of the turnaround from July to May to meet the 2-year repair deadline in the rule. The North Slope of Alaska is the area between the Brooks Range and the Arctic Ocean. It is located entirely above the Arctic Circle. North Slope operations are subjected to unique, harsh environments including:

 Extended wintertime durations throughout calendar year as compared to geographies in the lower 48 contiguous United States;

• Persistent wintertime ambient temperatures below 0 °F;

• Consistent ambient wind conditions in the excess of 10 miles per hour; and

• Snow ground cover typically from September to June each year (10 months out of the year).

Snow cover combined with low temperatures and high winds can create extremely hazardous working environments referred to "phase conditions" where reduced visibility ground level travel restrictions are implemented for the safety of our personnel. Phase conditions can occur on more than 30% of the days in the months from October to May.

For these reasons COPA hereby requests that EPA authorize an extension of the 2-year deadline for repairs under 40 CFR 60.5397a(h) for the last three of 123 fugitive emission components at KRU to the next scheduled CPF3 shutdown in July 2019. This short extension will minimize methane emissions and accommodate the shot seasonal window to perform extensive maintenance on the Alaska North Slope.

We appreciate your consideration of this request and would be happy to meet to discuss the issue or provide more information on request.

Sincerely,

Sarah Byam

Environmental Coordinator